Module 1 - Lecture 1

Introduction to Tools

WELCOME!

ELEVATE YOURSELF

Spot the difference?

The Basics

- Slack
- BitBucket
- Your mouse has an off switch.
- Sococo
- The Tech Elevator book has a language and version selection.
  - book.techelevator.com

FILES!

What is a File System?

- Controls how data is stored and retrieved

- There are many different types
  - Operating systems support specific file systems
  - What are some differences between file systems on MacOS (APFS) and Windows (NTFS)?

What is a File System?

A collection of:

- Filenames
- Directories
- Metadata

Working with the File System

I need to do:
- Navigate
- Read
- Write

- This can be done using a GUI like Finder or Windows Explorer. However, developers often use a Command Line Interface (CLI).

SHELLS!

What is a Shell?

A **shell** provides a text-based interface to interact with a computer's operating system.

- Within a shell, you write code that the computer understands. This tells the computer what to do.

- Many tasks in programming are done on the command line because it is more flexible than most GUI interfaces and can be scripted.

- We will be using a very popular shell called bash. For the most part, we will use the shell to work with the file system.

Common bash commands

- **Changing Directories**
  cd <directory_path>

- **Print Working Directory**
  pwd

- **List Directory Contents**
  ls, ls -al

- **Moving Files and Directories (also used for renaming)**
  mv <old_path> <new_path>

Common bash commands cont….

- **Remove Directory**

  rmdir <directory_path>   ** will only work if directory is empty

  rm -rf <directory_path>

- **Remove File**

  rm <file_path>

- **Copying Files and Directories**

  cp <old_path> <new_path>

- **Making Directories**

  mkdir <directory_path>

Common bash commands cont....

- **Making empty file**

  touch <file_path>

- **View contents of a file**

  cat <file_path>   ** displays entire file contents in shell
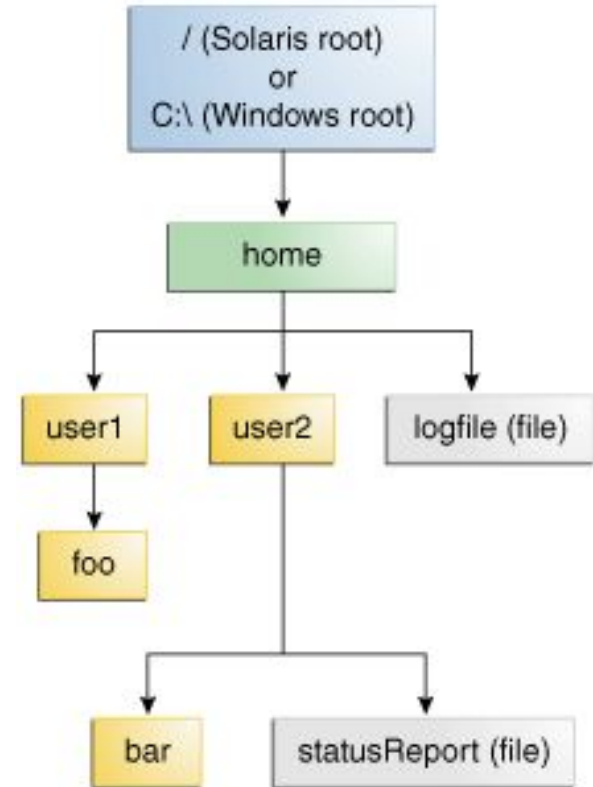
- **Clear shell of all text**

  clear

Absolute vs. Relative File Paths

A file path defines where a file or directory is. File paths can be **absolute** or **relative**.

An **absolute** path begins at the root of the file system.

A **relative** path begins where you are.

Paths are relative by default unless you provide an absolute path (begin with the root)

Miscellaneous shell identifiers

/ represents the root directory when at the beginning of a path. Anywhere else, / is a directory separator.

~ is an alias for the absolute path to your home directory (the Student folder) e.g. ~ is equivalent to /c/Users/Student

. is a reference to the current working directory

.. is a reference to the parent of the current working directory

Let's Code!

Breakout

There is a file located in ~/dir1 named techelevator.txt

Your starting location is ~/start and your home directory is /c/Users/Student

Your task:

- Create a directory named end in your home directory.
- Move the file into the end directory.
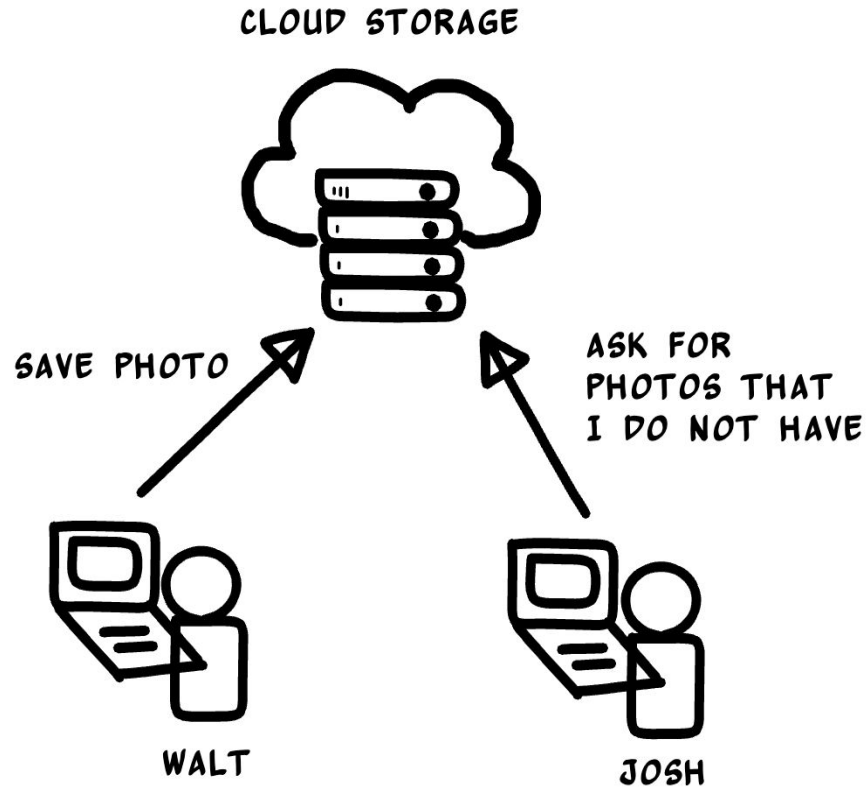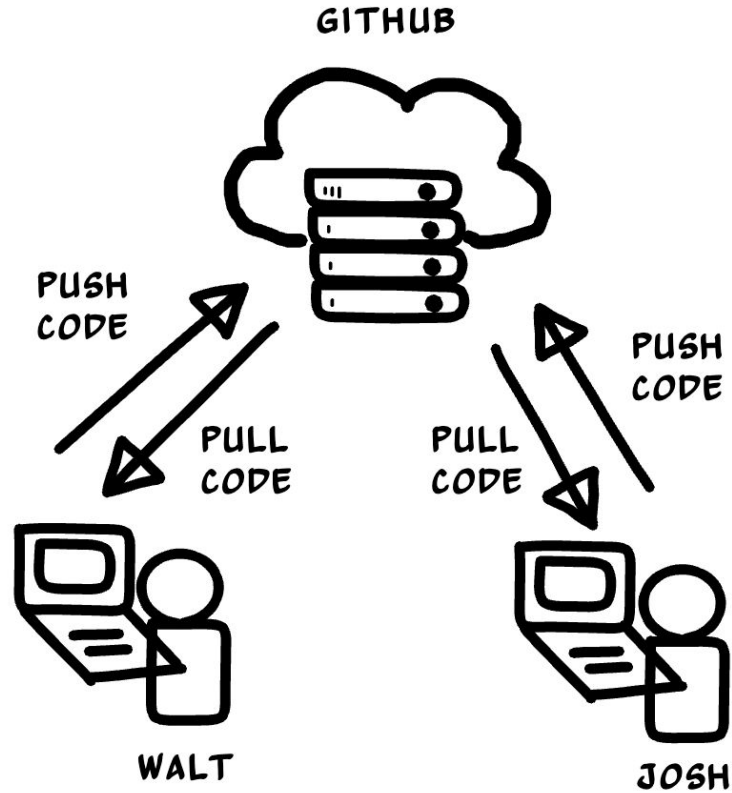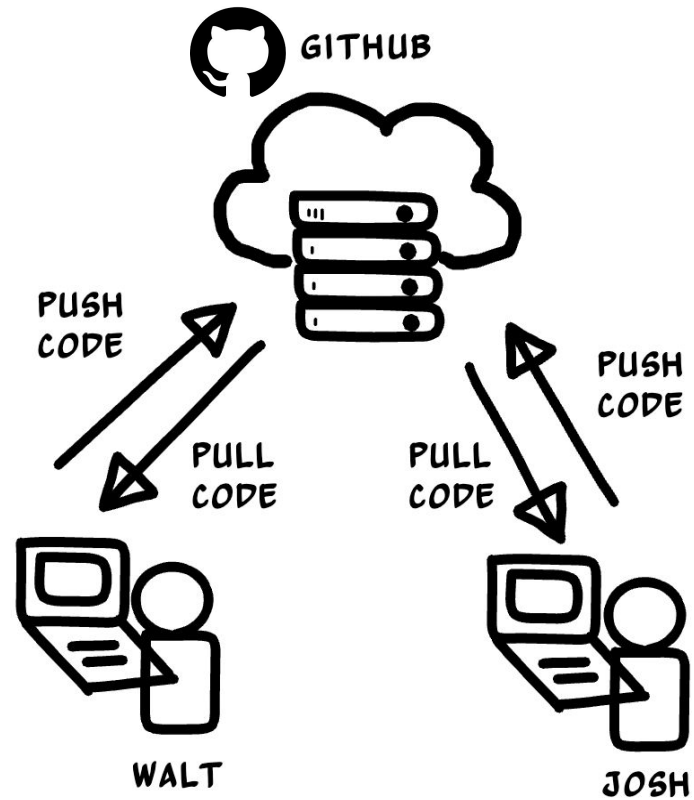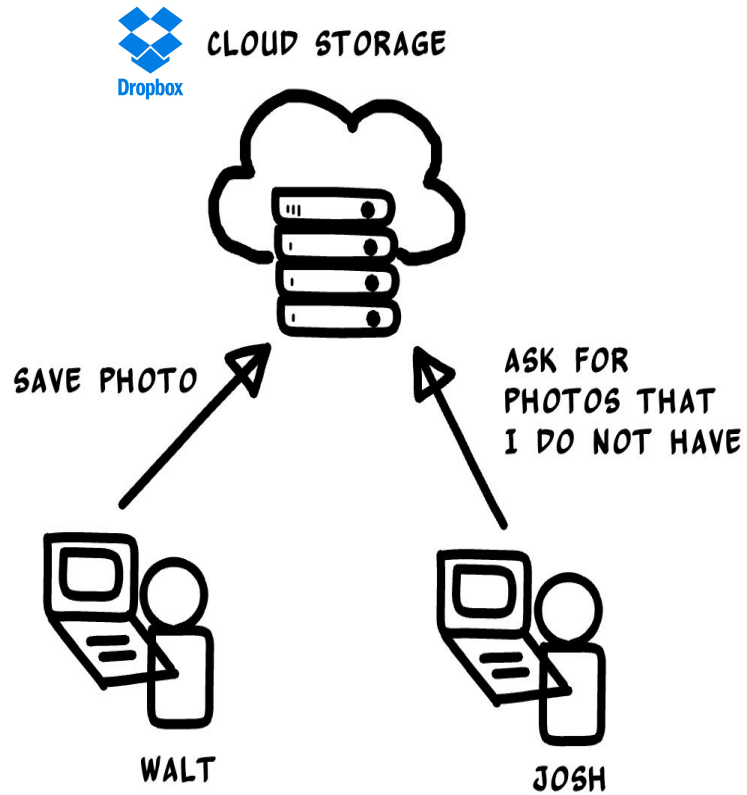- Remove the directory that the file was in initially.

Git!

Git Workflow

Prepare a local repository

1 *git clone* `repo_url`

Make local changes

2

Pushed

Unstaged / untracked

Push to server

5 *git push origin main*

Stage your changes

3 *git add -A*

Staged

Commit your work

4 *git commit -m "msg"*

Committed

ELEVATE A YOURSELF
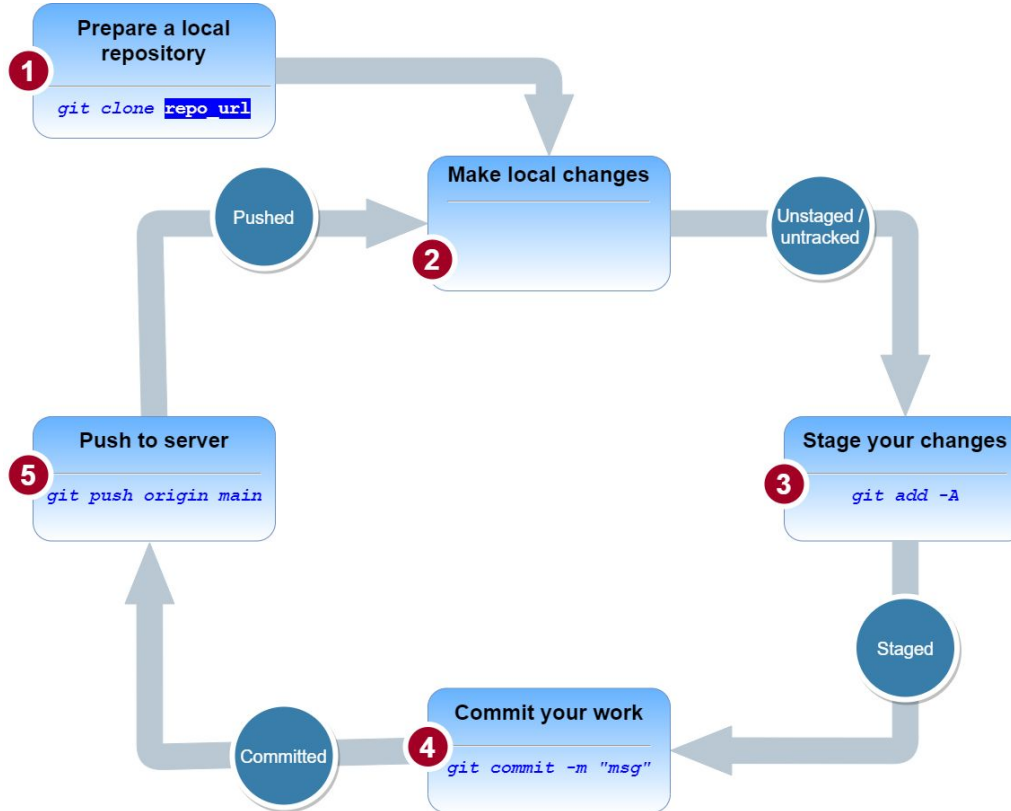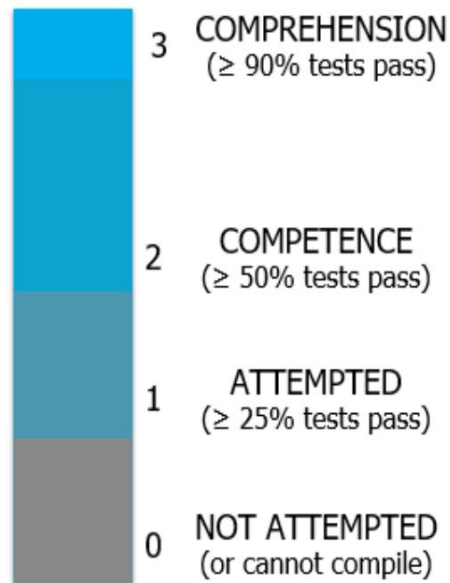
Let's Code!

Mastery and Understanding

- Our exercises focus on **mastery of key concepts.**

- **Feedback will be provided** so you know where you need to improve.

- You must remain **at or above an average of 2.0**.
- **Any work submitted must be your own**. We may ask you to explain your code to us!

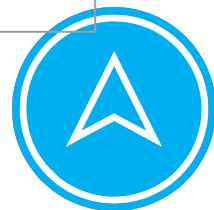- Seek out help from your classmates, academic fellows, and instructors!

3 COMPREHENSION
(≥ 90% tests pass)

2 COMPETENCE
(≥ 50% tests pass)

1 ATTEMPTED
(≥ 25% tests pass)

0 NOT ATTEMPTED
(or cannot compile)

Due Dates

You will receive exercises daily (almost). You submit your work by pushing to GitLab.

Exercise Given	Exercise Due
Monday	Wednesday 8AM
Tuesday	Thursday 8AM
Wednesday	Friday 8AM
Thursday	Monday 8AM
Friday	Tuesday 8AM

Late exercises receive a 0. You may submit late, but the highest possible score is a 2.

DAILY CADENCE

LEARN NEW CONCEPT

QUIZ

EXERCISES

SUPPORTING RESOURCES

INDUSTRY STANDARD TOOLS & TECHNOLOGIES

COURSE BOOK

GUIDED TUTORIALS

REAL-WORLD APPLICATION

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Your schedule

- 8:55 AM (or earlier) - Be in class
- 9:00 AM - Class starts
- A little review
- Learn new material
- Attend Pathway event
- Complete homework
- Prepare for tomorrow
  - Read the Tech Elevator book
  - Complete tutorials, if available
  - Take quiz
  - REST!

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BootcampOS

lms.techelevator.com

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QUESTIONS?